

Applied Catalysis A: General 125 (1995) 313-314



Author Index

Arena, F., Frusteri, F., Parmaliana, A. and Giordano, N.

Temperature-programmed reaction: a powerful and reliable method for catalyst testing in the partial oxidation of methane to formaldehyde 39

Armendariz, H., see Lopez, T. 217 Arruebarrena, M., see Scott, C.E. 71

Barbaux, Y., Bouqueniaux, D., Fornasari, G. and Trifirò, F.

Interpretation of the nature of oxidation sites of silica active in ammoximation reaction of cyclohexanone by surface potential measurements 303

Benazzi, E., see Silva, J.M. 1

Benazzi, E., see Silva, J.M. 15

Betancourt, P., see Scott, C.E. 71

Bolívar, C., see Scott, C.E. 71

Bouqueniaux, D., see Barbaux, Y. 303

Cai, G., Liu, Z., Shi, R., He, C., Yang, L., Sun, C. and Chang, Y.

Light alkenes from syngas via dimethyl ether 29 Căldăraru, M., Popa, V.T., Sprînceană, D. and Ionescu, N.I.

Surface dynamics in tin dioxide-containing catalysts I. Surface dynamics of tin dioxide interaction with propene-containing feed in presence of residual water 247

Chang, Y., see Cai, G. 29

Cid, R., Neira, J., Godoy, J., Palacios, J.M. and López Agudo, A.

Thiophene hydrodesulfurization on sulfided nickel-exchanged USY zeolites. Effect of the pH of the catalyst preparation 169

Damyanova, S., Spojakina, A. and Jiratova, K.

Effect of mixed titania–alumina supports on the
phase composition of NiMo/TiO₂–Al₂O₃

catalysts 257

Deganello, G., see Venezia, A.M. 113

De Lasa, H.I., see Simard, F. 81

Duca, D., see Venezia, A.M. 113

Fígoli, N.S., see Simard, F. 81

Figueras, F., see Lopez, T. 217

Fornasari, G., see Barbaux, Y. 303

Frusteri, F., see Arena, F. 39

Fujita, N., see Yokoyama, T. 159

Fujitani, T., Saito, M., Kanai, Y., Watanabe, T., Nakamura, J. and Uchijima, T.

Development of an active Ga₂O₃ supported palladium catalyst for the synthesis of methanol from carbon dioxide and hydrogen 199

Ganapathy, S., see Mal, N.K. 233

Garbowski, E. and Primet, M.

Corrigendum to: Catalytic combustion of methane over palladium on alumina catalysts: Evidence for reconstruction of particles (Appl. Catal. A, 109 (1994) 277–291) (APCATA 2705) 185

Giordano, N., see Arena, F. 39

Godoy, J., see Cid, R. 169

Goldwasser, J., see Scott, C.E. 71

Gomez, R., see Lopez, T. 217

Grabowski, R., Grzybowska, B., Samson, K., Słoczyński, J., Stoch, J. and Wcisło, K.

Effect of alkaline promoters on catalytic activity of V₂O₅/TiO₂ and MoO₃/TiO₂ catalysts in oxidative dehydrogenation of propane and in isopropanol decomposition 129

Grzybowska, B., see Grabowski, R. 129

Guisnet, M., see Silva, J.M. 1

Guisnet, M., see Silva, J.M. 15

Gulková, D. and Vít, Z.

Silica-ceria as support for the preparation of NiMo(P) hydrodesulfurization and hydrodenitrogenation catalysts 61

He, C., see Cai, G. 29

Ionescu, N.I., see Căldăraru, M. 247

Iwasa, N., Masuda, S., Ogawa, N. and Takezawa, N. Steam reforming of methanol over Pd/ZnO: Effect of the formation of PdZn alloys upon the reaction 145

Izumi, Y., see Onaka, M. 203

Jiratova, K., see Damyanova, S. 257

Josefina Pérez-Zurita, M., see Scott, C.E. 71

Kanai, Y., see Fujitani, T. 199

Kikuchi, E., see Matsuda, T. 293

Lepore, E., see Scott, C.E. 71

Liu, Z., see Cai, G. 29

Lopez, T., Navarrete, J., Gomez, R., Novaro, O., Figueras, F. and Armendariz, H.

Preparation of sol-gel sulfated ZrO₂-SiO₂ and characterization of its surface acidity 217

López Agudo, A., see Cid, R. 169

Maki, T., see Yokoyama, T. 159

Mal, N.K., Ramaswamy, V., Ganapathy, S. and Ramaswamy, A.V.

Synthesis of tin-silicalite molecular sieves with MEL structure and their catalytic activity in oxidation reactions 233

Marcano, P., see Scott, C.E. 71

Martorana, A., see Venezia, A.M. 113

Masuda, S., see Iwasa, N. 145

Matsuda, T., Shizuta, M., Yoshizawa, J. and Kikuchi, E.

Liquid-phase methanol synthesis on Cu-based ultrafine particles prepared by chemical deposition in liquid phase 293

Murzin, D., see Smeds, S. 271

Nakamura, J., see Fujitani, T. 199

Navarrete, J., see Lopez, T. 217

Neira, J., see Cid, R. 169

Novaro, O., see Lopez, T. 217

O'Connor, C., see Sewell, G. 99

Ogawa, N., see Iwasa, N. 145

Ohta, A., see Onaka, M. 203

Onaka, M., Ohta, A., Sugita, K. and Izumi, Y.
New application of solid base to regioselective

ring openings of functionalized epoxides and oxetanes with cyanotrimethylsilane 203

Palacios, J.M., see Cid, R. 169

Parmaliana, A., see Arena, F. 39

Popa, V.T., see Căldăraru, M. 247

Primet, M., see Garbowski, E. 185

Ramaswamy, A.V., see Mal, N.K. 233

Ramaswamy, V., see Mal, N.K. 233

Ramôa Ribeiro, F., see Silva, J.M. 1

Ramôa Ribeiro, F., see Silva, J.M. 15

Ribeiro, M.F., see Silva, J.M. 1

Ribeiro, M.F., see Silva, J.M. 15

Romero, T., see Scott, C.E. 71

Rossi, A., see Venezia, A.M. 113

Saito, M., see Fujitani, T. 199

Salmi, T., see Smeds, S. 271

Samson, K., see Grabowski, R. 129

Scott, C.E., Romero, T., Lepore, E., Arruebarrena, M., Betancourt, P., Bolívar, C., Josefina Pérez-Zurita, M., Marcano, P. and Goldwasser, J. Interaction between ruthenium and molybdenum

in RuMo/Al₂O₃ catalysts 71

Sedran, U.A., see Simard, F. 81 Sepúlveda, J., see Simard, F. 81

Sewell, G., O'Connor, C. and Steen, E.v.

Reductive amination of ethanol with silicasupported cobalt and nickel catalysts 99

Shi, R., see Cai, G. 29

Shizuta, M., see Matsuda, T. 293

Silva, J.M., Ribeiro, M.F., Ramôa Ribeiro, F., Benazzi, E. and Guisnet, M.

Influence of platinum on the transformation of an ethylbenzene–o-xylene mixture on H-ZSM-5 1

Silva, J.M., Ribeiro, M.F., Ramôa Ribeiro, F., Benazzi, E. and Guisnet, M.

Transformation of an ethylbenzene-o-xylene mixture on HMOR and Pt-HMOR catalysts. Comparison with ZSM-5 catalysts 15

Simard, F., Sedran, U.A., Sepúlveda, J., Fígoli, N.S. and De Lasa, H.I.

ZnO-Cr₂O₃+ZSM-5 catalyst with very low Zn/ Cr ratio for the transformation of synthesis gas to hydrocarbons 81

Słoczyński, J., see Grabowski, R. 129

Smeds, S., Murzin, D. and Salmi, T.

Kinetics of ethylbenzene hydrogenation on Ni/Al₂O₃ 271

Spojakina, A., see Damyanova, S. 257

Sprînceană, D., see Căldăraru, M. 247

Steen, E.v., see Sewell, G. 99

Stoch, J., see Grabowski, R. 129

Sugita, K., see Onaka, M. 203

Sun, C., see Cai, G. 29

Takezawa, N., see Iwasa, N. 145

Trifirò, F., see Barbaux, Y. 303

Uchijima, T., see Fujitani, T. 199

Venezia, A.M., Rossi, A., Duca, D., Martorana, A. and Deganello, G.

Particle size and metal-support interaction effects in pumice supported palladium catalysts 113

Vít, Z., see Gulková, D. 61

Watanabe, T., see Fujitani, T. 199

Wcisło, K., see Grabowski, R. 129

Yang, L., see Cai, G. 29

Yokoyama, T., Fujita, N. and Maki, T.

Formation of dihydrogen and carboxylic acid from water and aldehyde over metal oxide catalysts 159

Yoshizawa, J., see Matsuda, T. 293



Applied Catalysis A: General 125 (1995) 315-319



Subject Index

Adsorption

Surface dynamics in tin dioxide-containing catalysts I. Surface dynamics of tin dioxide interaction with propene-containing feed in presence of residual water 247

Alkaline promoters

Effect of alkaline promoters on catalytic activity of V_2O_5/TiO_2 and MoO_3/TiO_2 catalysts in oxidative dehydrogenation of propane and in isopropanol decomposition 129

Alkenes

Light alkenes from syngas via dimethyl ether 29 Ammoximation

Interpretation of the nature of oxidation sites of silica active in ammoximation reaction of cyclohexanone by surface potential measurements 303

Amorphous silica

Interpretation of the nature of oxidation sites of silica active in ammoximation reaction of cyclohexanone by surface potential measurements 303

Aromatics (C₈) transformation

Influence of platinum on the transformation of an ethylbenzene-o-xylene mixture on H-ZSM-5 1 Transformation of an ethylbenzene-o-xylene mixture on HMOR and Pt-HMOR catalysts. Comparison with ZSM-5 catalysts 15

Benzoic acid

Formation of dihydrogen and carboxylic acid from water and aldehyde over metal oxide catalysts 159

Bimetallics

Interaction between ruthenium and molybdenum in RuMo/Al₂O₃ catalysts 71

Calcium oxide

New application of solid base to regioselective ring openings of functionalized epoxides and oxetanes with cyanotrimethylsilane 203

Carbon monoxide chemisorption

Interaction between ruthenium and molybdenum in RuMo/Al₂O₃ catalysts 71

Catalyst characterization (IR/DRS/TPR/TPD)

Effect of mixed titania-alumina supports on the

phase composition of NiMo/ TiO_2 - Al_2O_3 catalysts 257

Catalyst characterization (XRD/DTA/BET/TPR/ IR/XPS)

ZnO-Cr₂O₃ + ZSM-5 catalyst with very low Zn/ Cr ratio for the transformation of synthesis gas to hydrocarbons 81

Chromium promotion

Formation of dihydrogen and carboxylic acid from water and aldehyde over metal oxide catalysts 159

Cobalt

Reductive amination of ethanol with silicasupported cobalt and nickel catalysts 99

Copper

Liquid-phase methanol synthesis on Cu-based ultrafine particles prepared by chemical deposition in liquid phase 293

Cyanotrimethylsilane

New application of solid base to regioselective ring openings of functionalized epoxides and oxetanes with cyanotrimethylsilane 203

Cyclohexanone oxime

Interpretation of the nature of oxidation sites of silica active in ammoximation reaction of cyclohexanone by surface potential measurements 303

Dealkylation

Influence of platinum on the transformation of an ethylbenzene-o-xylene mixture on H-ZSM-5 1 Transformation of an ethylbenzene-o-xylene mixture on HMOR and Pt-HMOR catalysts. Comparison with ZSM-5 catalysts 15

Dimethyl ether

Light alkenes from syngas via dimethyl ether 29
Disproportionation

Influence of platinum on the transformation of an ethylbenzene-o-xylene mixture on H-ZSM-5 l' Transformation of an ethylbenzene-o-xylene mixture on HMOR and Pt-HMOR catalysts.

Comparison with ZSM-5 catalysts 15 Electrical conductivity

Surface dynamics in tin dioxide-containing catalysts I. Surface dynamics of tin dioxide

interaction with propene-containing feed in presence of residual water 247

Electronic interactions

Interaction between ruthenium and molybdenum in RuMo/Al₂O₃ catalysts 71

Epoxide

New application of solid base to regioselective ring openings of functionalized epoxides and oxetanes with cyanotrimethylsilane 203

Ethanol amination

Reductive amination of ethanol with silicasupported cobalt and nickel catalysts 99

Ethylbenzene

Influence of platinum on the transformation of an ethylbenzene–o-xylene mixture on H-ZSM-5 1 Transformation of an ethylbenzene–o-xylene mixture on HMOR and Pt-HMOR catalysts. Comparison with ZSM-5 catalysts 15

Kinetics of ethylbenzene hydrogenation on Ni/ Al₂O₃ 271

Formaldehyde

Temperature-programmed reaction: a powerful and reliable method for catalyst testing in the partial oxidation of methane to formaldehyde 39

Hexane isomerization

Preparation of sol-gel sulfated ZrO₂-SiO₂ and characterization of its surface acidity 217

HMOR

Transformation of an ethylbenzene-o-xylene mixture on HMOR and Pt-HMOR catalysts. Comparison with ZSM-5 catalysts 15

Hydrocarbons

 $ZnO-Cr_2O_3+ZSM-5$ catalyst with very low Zn/Cr ratio for the transformation of synthesis gas to hydrocarbons 81

Hydrodenitrogenation

Silica-ceria as support for the preparation of NiMo(P) hydrodesulfurization and hydrodenitrogenation catalysts 61

Hydrodesulfurization

Silica-ceria as support for the preparation of NiMo(P) hydrodesulfurization and hydrodenitrogenation catalysts 61

Hydrodesulphurization

Effect of mixed titania-alumina supports on the phase composition of NiMo/TiO₂-Al₂O₃ catalysts 257

Hydrogen

Interaction between ruthenium and molybdenum in RuMo/Al₂O₃ catalysts 71

Formation of dihydrogen and carboxylic acid from water and aldehyde over metal oxide catalysts 159

Hydrogenation

Kinetics of ethylbenzene hydrogenation on Ni/ Al₂O₃ 271

Hydroxyapatite

New application of solid base to regioselective ring openings of functionalized epoxides and oxetanes with cyanotrimethylsilane 203

Hydroxylation on Sn-silicates

Synthesis of tin-silicalite molecular sieves with MEL structure and their catalytic activity in oxidation reactions 233

Hydroxyl groups

Silica-ceria as support for the preparation of NiMo(P) hydrodesulfurization and hydrodenitrogenation catalysts 61

H-ZSM-5

Influence of platinum on the transformation of an ethylbenzene—o-xylene mixture on H-ZSM-5 1 Transformation of an ethylbenzene—o-xylene mixture on HMOR and Pt-HMOR catalysts. Comparison with ZSM-5 catalysts 15

Isomerization

Transformation of an ethylbenzene-o-xylene mixture on HMOR and Pt-HMOR catalysts. Comparison with ZSM-5 catalysts 15

Isopropanol decomposition

 $\begin{array}{lll} Effect \ of \ alkaline \ promoters \ on \ catalytic \ activity \\ of \ \ V_2O_5/TiO_2 \ \ and \ \ MoO_3/TiO_2 \ \ catalysts \ \ in \\ oxidative \ \ dehydrogenation \ \ of \ propane \ \ and \ \ in \\ isopropanol \ decomposition \ \ \ 129 \\ \end{array}$

Kinetics

Kinetics of ethylbenzene hydrogenation on Ni/ Al₂O₃ 271

Lewis acidity

Preparation of sol-gel sulfated ZrO₂-SiO₂ and characterization of its surface acidity 217

Light alkenes

Light alkenes from syngas via dimethyl ether 29 Liquid phase

Liquid-phase methanol synthesis on Cu-based ultrafine particles prepared by chemical deposition in liquid phase 293

Magnesium oxide

New application of solid base to regioselective ring openings of functionalized epoxides and oxetanes with cyanotrimethylsilane 203

Metal-support interaction

Particle size and metal-support interaction effects in pumice supported palladium catalysts 113

Methane

Temperature-programmed reaction: a powerful and reliable method for catalyst testing in the partial oxidation of methane to formaldehyde 39 lethanol

Liquid-phase methanol synthesis on Cu-based ultrafine particles prepared by chemical deposition in liquid phase 293

Methanol synthesis

Development of an active Ga2O3 supported

palladium catalyst for the synthesis of methanol from carbon dioxide and hydrogen 199

Mixed oxides

Preparation of sol-gel sulfated ZrO₂-SiO₂ and characterization of its surface acidity 217

Molecular sieves

Light alkenes from syngas via dimethyl ether 29 Molybdena/titania

Effect of alkaline promoters on catalytic activity of V_2O_3/TiO_2 and MoO_3/TiO_2 catalysts in oxidative dehydrogenation of propane and in isopropanol decomposition 129

Nickel

Reductive amination of ethanol with silicasupported cobalt and nickel catalysts 99

Kinetics of ethylbenzene hydrogenation on Ni/ Al₂O₃ 271

Nickel-molybdenum/TiO2-Al2O3

Effect of mixed titania-alumina supports on the phase composition of NiMo/TiO₂-Al₂O₃ catalysts 257

Nickel sulfide

Thiophene hydrodesulfurization on sulfided nickel-exchanged USY zeolites. Effect of the pH of the catalyst preparation 169

NiMo sulfide catalysts

Silica-ceria as support for the preparation of NiMo(P) hydrodesulfurization and hydrodenitrogenation catalysts 61

Oxetane

New application of solid base to regioselective ring openings of functionalized epoxides and oxetanes with cyanotrimethylsilane 203

Oxidation with H₂O₂ on Sn-silicates

Synthesis of tin-silicalite molecular sieves with MEL structure and their catalytic activity in oxidation reactions 233

Oxide catalysts

Temperature-programmed reaction: a powerful and reliable method for catalyst testing in the partial oxidation of methane to formaldehyde 39

Palladium/pumice

Particle size and metal-support interaction effects in pumice supported palladium catalysts 113

Palladium catalyst

Development of an active Ga_2O_3 supported palladium catalyst for the synthesis of methanol from carbon dioxide and hydrogen 199

Partial oxidation

Temperature-programmed reaction: a powerful and reliable method for catalyst testing in the partial oxidation of methane to formaldehyde 39 Particle size effect

Particle size and metal-support interaction effects in pumice supported palladium catalysts 113

Pd/ZnO catalyst

Steam reforming of methanol over Pd/ZnO: Effect of the formation of PdZn alloys upon the reaction 145

PdZn alloy

Steam reforming of methanol over Pd/ZnO: Effect of the formation of PdZn alloys upon the reaction 145

Propane oxidative dehydrogenation

Effect of alkaline promoters on catalytic activity of V₂O₅/TiO₂ and MoO₃/TiO₂ catalysts in oxidative dehydrogenation of propane and in isopropanol decomposition 129

Propene oxidation

Surface dynamics in tin dioxide-containing catalysts I. Surface dynamics of tin dioxide interaction with propene-containing feed in presence of residual water 247

Protonic acidity

Preparation of sol-gel sulfated ZrO₂-SiO₂ and characterization of its surface acidity 217

Pt-HMOR

Transformation of an ethylbenzene-o-xylene mixture on HMOR and Pt-HMOR catalysts. Comparison with ZSM-5 catalysts 15

Pt-H-ZSM-5

Influence of platinum on the transformation of an ethylbenzene-o-xylene mixture on H-ZSM-5 1
Transformation of an ethylbenzene-o-xylene mixture on HMOR and Pt-HMOR catalysts.
Comparison with ZSM-5 catalysts 15

Reaction kinetics

Kinetics of ethylbenzene hydrogenation on Ni/ Al_2O_3-271

Regioselectivity

New application of solid base to regioselective ring openings of functionalized epoxides and oxetanes with cyanotrimethylsilane 203

Ring opening

New application of solid base to regioselective ring openings of functionalized epoxides and oxetanes with cyanotrimethylsilane 203

Ruthenium-molybdenum

 $\label{eq:linear_constraint} Interaction \ between \ ruthenium \ and \ molybdenum \\ in \ RuMo/Al_2O_3 \ catalysts \qquad 71$

SAPO-34

Light alkenes from syngas via dimethyl ether 29 SEM-EDX

Thiophene hydrodesulfurization on sulfided . nickel-exchanged USY zeolites, Effect of the pH of the catalyst preparation 169

Silica-ceria

Silica-ceria as support for the preparation of NiMo(P) hydrodesulfurization and hydrodenitrogenation catalysts 61

Sn-silicates synthesis

Synthesis of tin-silicalite molecular sieves with MEL structure and their catalytic activity in oxidation reactions 233

Solid base

New application of solid base to regioselective ring openings of functionalized epoxides and oxetanes with cyanotrimethylsilane 203

Steam reforming of methanol

Steam reforming of methanol over Pd/ZnO: Effect of the formation of PdZn alloys upon the reaction 145

Sulfated zirconia

Preparation of sol-gel sulfated ZrO₂-SiO₂ and characterization of its surface acidity 217

Support effect

Development of an active Ga₂O₃ supported palladium catalyst for the synthesis of methanol from carbon dioxide and hydrogen 199

Surface dynamics

Surface dynamics in tin dioxide-containing catalysts I. Surface dynamics of tin dioxide interaction with propene-containing feed in presence of residual water 247

Surface potential technique

Interpretation of the nature of oxidation sites of silica active in ammoximation reaction of cyclohexanone by surface potential measurements 303

Syngas conversion

ZnO-Cr₂O₃+ZSM-5 catalyst with very low Zn/ Cr ratio for the transformation of synthesis gas to hydrocarbons 81

Synthesis gas

Light alkenes from syngas via dimethyl ether 29 Temperature-programmed reaction

Temperature-programmed reaction: a powerful and reliable method for catalyst testing in the partial oxidation of methane to formaldehyde 39

Temperature-programmed reduction

Steam reforming of methanol over Pd/ZnO: Effect of the formation of PdZn alloys upon the reaction 145

Thiophene hydrodesulfurization on sulfided nickel-exchanged USY zeolites. Effect of the pH of the catalyst preparation 169

Testing of catalysts

Temperature-programmed reaction: a powerful and reliable method for catalyst testing in the partial oxidation of methane to formaldehyde 39

Thiophene hydrodesulfurization

Thiophene hydrodesulfurization on sulfided nickel-exchanged USY zeolites. Effect of the pH of the catalyst preparation 169

Tin dioxide

Surface dynamics in tin dioxide-containing

catalysts I. Surface dynamics of tin dioxide interaction with propene-containing feed in presence of residual water 247

Tin-MFI -silicalites

Synthesis of tin-silicalite molecular sieves with MEL structure and their catalytic activity in oxidation reactions 233

Tin-silicate

Synthesis of tin-silicalite molecular sieves with MEL structure and their catalytic activity in oxidation reactions 233

Ultrafine particles

Liquid-phase methanol synthesis on Cu-based ultrafine particles prepared by chemical deposition in liquid phase 293

Vanadia/titania

Effect of alkaline promoters on catalytic activity of V₂O₅/TiO₂ and MoO₃/TiO₂ catalysts in oxidative dehydrogenation of propane and in isopropanol decomposition 129

Vanadium

Liquid-phase methanol synthesis on Cu-based ultrafine particles prepared by chemical deposition in liquid phase 293.

X-ray photoelectron spectroscopy

Particle size and metal-support interaction effects in pumice supported palladium catalysts 113

Xvlene isomerization

Influence of platinum on the transformation of an ethylbenzene–o-xylene mixture on H-ZSM-5 1 Transformation of an ethylbenzene–o-xylene mixture on HMOR and Pt-HMOR catalysts. Comparison with ZSM-5 catalysts 15

Zeolites

Influence of platinum on the transformation of an ethylbenzene–o-xylene mixture on H-ZSM-5 1 Transformation of an ethylbenzene–o-xylene mixture on HMOR and Pt-HMOR catalysts. Comparison with ZSM-5 catalysts 15

 $ZnO-Cr_2O_3+ZSM-5$ catalyst with very low Zn/Cr ratio for the transformation of synthesis gas to hydrocarbons 81

Thiophene hydrodesulfurization on sulfided nickel-exchanged USY zeolites. Effect of the pH of the catalyst preparation 169

Zinc oxide-chromium oxide

ZnO-Cr₂O₃+ZSM-5 catalyst with very low Zn/ Cr ratio for the transformation of synthesis gas to hydrocarbons 81

Zirconia

Formation of dihydrogen and carboxylic acid from water and aldehyde over metal oxide catalysts 159

ZSM-5

Influence of platinum on the transformation of an ethylbenzene-o-xylene mixture on H-ZSM-5 1

 $ZnO-Cr_2O_3 + ZSM-5 \ catalyst \ with \ very \ low \ Zn/Cr \ ratio \ for \ the \ transformation \ of \ synthesis \ gas \ to \ hydrocarbons \ \ 81$



